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ABSTRACT

A community educational needs assessment was conducted to determine how well Pima Community College (PCC) was meeting community needs, provide information for updating PCC's 5-year master plan, enhance administrative decision making, and assist faculty in course and program revision. Surveys of high school students, county residents, and major area employers were utilized. Responses from 7,791 high school students to a career interests survey revealed that 15.3% planned to attend a community college and that the computer science field was the first or second career choice of 11.8% of the students, while an engineering career was the first or second choice of 11.3% of the students. Responses from 278 of 800 county residents surveyed indicated that 61% were or had been enrolled at PCC; 61% would enroll in the next 2 years if needed courses were offered; general interest and upgrading job skills were the primary reasons for college enrollment; respondents expressed greatest interest in business, office education, computer science, and public service courses; and 81.4% of the respondents preferred evening or weekend classes. Of the 272 employers surveyed, 148 responded. Of these, 96% were satisfied with employees trained at the college, and 51% reported no difficulty in locating qualified job applicants. College graduates were hired most frequently in the services field and least frequently for mining and construction jobs. Study questions are appended. (LL)

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Office of Planning & Development Research Paper
ED234836
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COMMUNITY EDUCATIONAL NEEDS ASSESSMENT

Arthur H. Evans, Jr.

July 1983

Pima Community College
Tucson, AZ 85709

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Preface

Pima Community College is committed to making decisions based upon sound information. Future directions for the College are established in the College Five Year Master Plan, a document which is updated every two years.

To assist the College planning process, President S. James Manilla asked that College staff undertake a Community Educational Needs Assessment during 1982-83. Responsibility for the project was assigned to Dr. Judith W. Leslie, Vice President for Planning and Development.

The survey research data for this report was prepared by Russell C. Collmer, Director of the Office of Institutional Research. Members of his staff who assisted him included Phil Henry, Doris Garner, and Vivienne Intogna. The report was typed by Laurie Rochin and the figures were prepared by Dave Stephen, Director of the Centre for Archaeological Field Training.

Reports of this type should always by considered as working documents, not historical statements to be placed on a shelf. Hopefully, this Community Educational Needs Assessment will raise as many questions as it answers. This report should serve as an overview of an important topic. The survey data can be analyzed further as needed to respond to additional questions. For those questions for which definitive answers cannot be developed from the data, direction will have been provided for future survey research of the community by the College as part of its broad commitment to serve the community.

Arthur H. Evans, Jr., Ph.D.
Office of Planning and Development

Introduction

Background

Educational institutions are committed to the development and transmission of knowledge and to the training in the skills necessary to use knowledge. They serve the general population and in turn receive support from tax revenues.

As one of the major components of post-secondary education, community colleges serve the educational needs of a well defined geographical area. In the case of Pima Community College, this area is Pima County, Arizona.

Like any service organization, community colleges recognize the need to know as much as possible about the clients they serve so that the appropriate educational programs and services can be provided. This desire comes from the altruism of service to others and the pragmatism of maintaining financial support from tax dollars and student tuition and fees.

Pima Community College has been committed since its founding to the development and utilization of information about its community and the people it serves. There is an increasing recognition throughout the college of the need to base decisions on sound information.

The College's Institutional Research Office was created in 1970 and has focused its attention on analyzing and interpreting the needs and interests of current and former students and of the community from which these students come and to which they return. Ongoing studies have focused on various dimensions of the current student body and former students. External studies have examined students transferring to universities and employers of the College's graduates.

This Community Educational Needs Assessment represents an effort to examine for the first time in a single report three dimensions of the community--employers, residents and high school students--as a means to guiding the College's planning. Since the majority of the College's students have attended high school, the attitudes and interests of current high school students are important for a community college desiring to serve them whenever they may choose to enroll. With an average age of thirty, the College's student body obviously is drawn from the entire adult population of the county. Not only are some of these individuals clients, all are financial supporters through the payment of state and local taxes. Employers likewise support the college through their tax payments and desire to benefit through being able to employ persons trained in the skills needed in many of their positions. Major employers, those with over 100 employees, constitute a significant force in this area and hence were surveyed for this study.

While the scope of this study is perhaps a first time effort for the College, various parts of it have been conducted at other times through a variety of other data collection procedures. Whenever possible, the studies used for this report have attempted to build upon those previous efforts, thus allowing for sharper focus and some evidence of trends.

Objectives

This Community Educational Needs Assessment has been designed to accomplish several objectives:

1. To provide a current view of how well the College is meeting the needs of the community it serves.

2. To provide information for use by the College and Campus Master Planning Committees to guide their work in the next updating of the Five Year Master Plan.

3. To provide data to administrative personnel to enhance their decision making.

4. To assist faculty in various program areas by providing pointers regarding where they might focus their attention as they revise their programs and courses.

Methodology

Overview

Several strategies were employed to ensure that this Community Educational Needs Assessment would provide the maximum useful information within the constraints of available resources. Needs assessments conducted by other community colleges were examined for methodology and format. Those done for Harrisburg Area Community College (Selgas, 1977) and Arizona College of Technology (Schultz and Roed, 1977) served as useful models. Cooperation and assistance were also obtained from other community organizations and agencies.

High School Student Survey

While the College has monitored closely the flow of high school students to the College, it has not previously analyzed separately their program interests. The study by M.R. West Marketing Inc., Citizen Attitude Survey, conducted for the College in 1978, did include the results of interviews with 116 high school students as part of their comprehensive look at the community.

The College's interest in assessing the educational needs of high school students coincided with the interest of the Catalina Council of the Boy Scouts of America, which serves Pima County, to learn the career and recreational interests of high school students. Since this survey was recently conducted, included the information needed for this needs assessment project, and was immediately available for analysis, it was chosen as the source of information regarding high school students. A total of 7,791 Pima County high school students completed the questionnaire.

County Residents Survey

The College has surveyed the educational interests of Pima County residents in different ways and at different times. Of particular note are the Tucson Model Neighborhoods Higher Education Facilities Planning-Final Report (Bockman, 1973) and the Citizen Attitude Survey (M.R. West Marketing Research Inc., 1978). For this study, the College's Institutional Research Office prepared a Survey of County Residents utilizing successful questions from previous surveys. The draft questionnaire was reviewed by the College's Executive Staff whose suggestions for clarification and enhancement were included.

The survey was sent to 800 Pima County residents based upon a randomly-selected listing purchased from Cole Publications, Lincoln, Nebraska. Three mailings were made, a post card announcing the survey, a copy of the survey with a business reply envelope, and a follow-up copy of the questionnaire. A total of 278 responses were received. Because of response bias, the data were adjusted to conform to the ethnicity, gender, and age of the Pima County population based upon 1980 census data.

Major Employers Survey

Beginning in 1975, the College's Institutional Research Office began a process of periodically surveying major Pima County employers. After a review of employment data from the Arizona Department of Economic Security (DES), a major employer was defined as a firm employing 100 or more employees. The initial survey was conducted through a series of one hour on-site interviews (Sherwood, 1976). Two subsequent surveys were conducted by mail (Sherwood, 1978 and 1980).

For this needs assessment, the questionnaire from the 1980 survey served as the basis for developing the instrument to be used. The College's Executive Staff reviewed the questionnaire and their suggestions for clarification and enhancement were included. The survey was mailed to 272 employers with 100 or more employees based upon DES information and was followed with

a reminder postcard. Together these public and private businesses account for 50% of the non-agriculutral employment in Pima County. A total of 148 replies were received.

Analysis of Data

Overview

The three surveys used for this needs assessment have provided important information for planning and decision making. When coupled with previous college studies, certain directions can be confirmed. As with all survey research, the data collected do not always provide all the desired answers. The analysis of the results of these surveys will focus upon information of interest and importance to the entire College. Further analysis can be made if additional questions need to be answered.

High School Student Survey

Students in the 9th, 10th, 11th and 12th grades of twelve urban Pima County High Schools completed the Career Interest Survey. A total of 7,791 high school students participated of which 3,822 were males (49.1%) and 3,969 were females (50.9%).

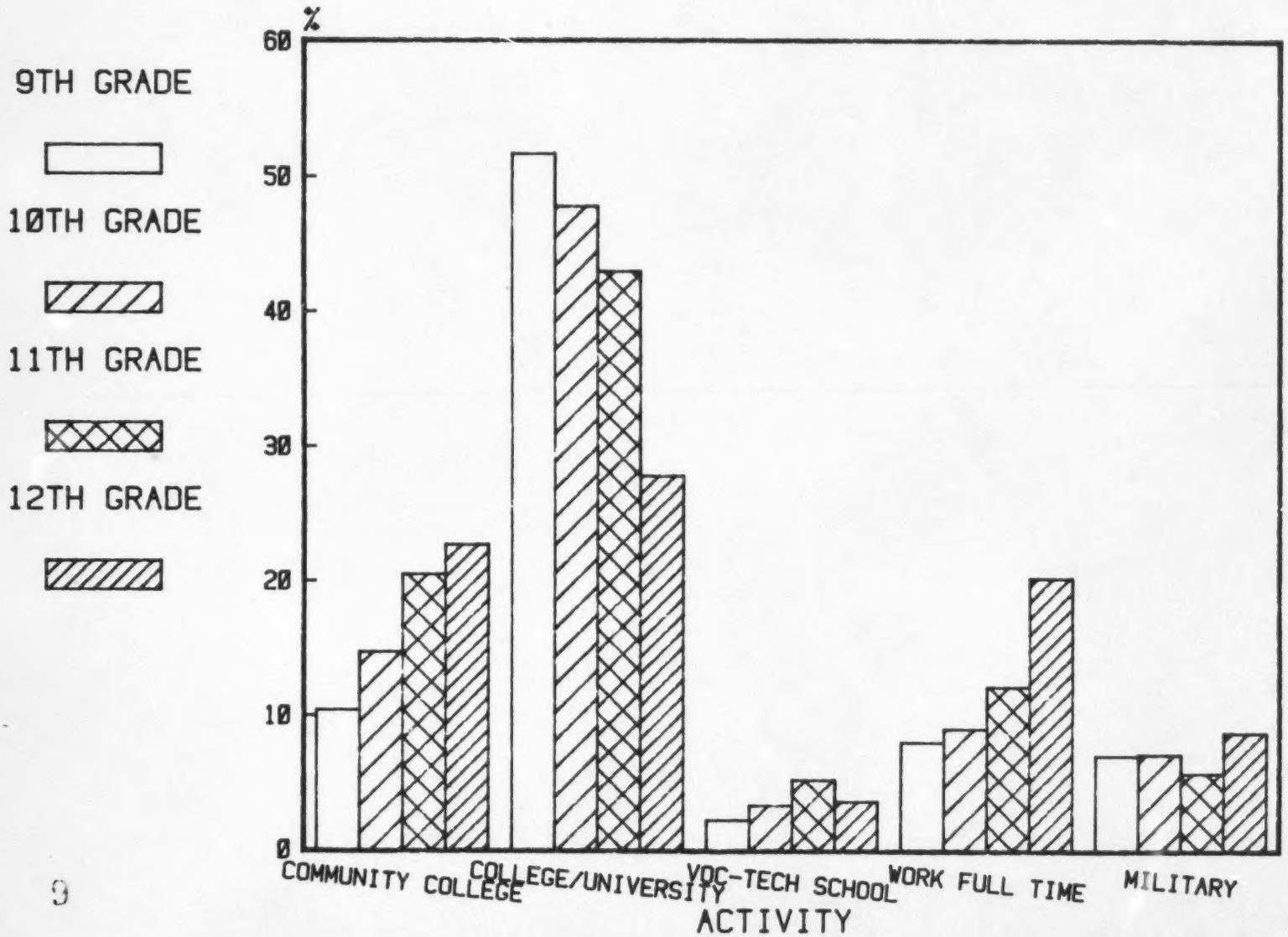
When these high school students were asked to complete the sentence, "The 1st year after high school I plan to:," they responded to the choices given as follows:

1.	Go to community college (2 yr.)	15.3%
2.	Go to university (4 yr.)	47.0%
3.	Attend voc-tech school	3.5%
4.	Work full time	10.1%
5.	Enter military service	6.7%
6.	Other or no plan	17.4%

Of greater interest is the difference in these responses for each of the four grades. Figure 1 shows the percentage response for each grade to the first five choices regarding plans after graduation. The consistent increase in the percentage selecting community college indicates increased awareness of Pima Community College over time. In Fall 1982, 20.5% of the 1982 urban Pima County high school graduates enrolled at Pima Community College, a figure very close to the stated plan for twelfth graders. A similar pattern of increase is seen in the responses to "Work full time." The most dramatic decrease is in those students selecting "Go to university (4 yr.)" which

Figure 1

HIGH SCHOOL STUDENTS
POST-GRADUATION PLANS



drop from a high of 51.7% for ninth grade to a low of 27.8% for twelfth grade. Voc-tech school, military service and other showed no major changes from ninth through twelfth grade.

Given the changes which are evident in high school student plans after graduation, analysis of career interests focused on the responses by eleventh graders. Since only 3.6% of the responses were from seniors versus 31% from juniors, it was felt that these 2,417 high school juniors would provide a better distribution of career interests and would be closer to their actual choice than the choices indicated by freshmen and sophomores.

The survey listed 99 career choices and asked the respondents to identify a first choice and a second choice. All 2,417 juniors indicated a first choice and 2,399 provided a second choice. In reviewing the list of choices, the decision was made to collapse the responses to the four separate engineering fields, civil, electrical, mechanical, and nuclear/solar, into a single career interest, Engineering. Given the number of responses to this area and the fact that lower division course work for all engineering fields has more similarities than differences, this single category allowed the strength of this career interest to show more clearly.

Table 1 is a rank order listing of the twenty-eight career interests, out of the adjusted 96 possible choices, which received the highest number of responses from high school juniors. These 1,609 responses accounted for 66.6% of the first choice career interests. Listed along side each career interest is the number of high school juniors who selected that field as their second choice. These 1,297 responses represented 54.1% of the second choice career interest of the juniors who responded to that part of the question. While the rank order for the second career interest is different from the first choices as would be expected, the degree of similarity is quite remarkable and enhances the significance of these choices. For only one field, Agent/Purchasing/Marketing, was the second choice response level lower than the minimum used for inclusion of a career interest on the first choice list.

In an effort to understand the potential impact of these juniors' career interests on enrollment in Pima Community College programs and courses, an effort was made to compare these high school student interests with the curriculum intent of Fall semester 1982 students attending Pima. Because of the lack of comparability between the names of the career interests on the high school student survey and the titles of the College's curriculum intents, direct comparison was possible in only a few cases. However, for areas of high interest where direct comparisons are possible, the information provides direction for future planning.

Table 1
Eleventh Grade Students Career Interests
First and Second Choices

Career Interests*	First Choice		Second Choice	
Computer/Programmer/Other	171	(7.1%)	113	(4.7%)
Engineer (all categories)**	150	(6.2%)	123	(5.1%)
Secretary/All Kinds	92	(3.8%)	76	(3.2%)
Doctor/General/Specialist	89	(3.7%)	35	(1.5%)
Architect	76	(3.1%)	41	(1.7%)
Lawyer/Para-Legal	72	(3.0%)	49	(2.0%)
Nurse/RN/LPN	72	(3.0%)	35	(1.5%)
Accountant	62	(2.6%)	43	(1.8%)
Music/Performer/Composer	60	(2.5%)	46	(1.9%)
Psychologist	56	(2.3%)	45	(1.9%)
Mechanic/Auto/Diesel	54	(2.2%)	40	(1.7%)
School Teacher/Counselor/Admin.	50	(2.1%)	39	(1.6%)
Barber/Beautician	49	(2.0%)	30	(1.3%)
Steel Worker/Welder	45	(1.9%)	31	(1.3%)
Pro Athlete/Coach	44	(1.8%)	46	(1.9%)
Small Business Owner	43	(1.8%)	57	(2.4%)
Flight Attendant	42	(1.7%)	55	(2.3%)
Airplane/Pilot/Navigator	41	(1.7%)	47	(2.0%)
Physical Therapist	38	(1.6%)	41	(1.7%)
Photographer	37	(1.5%)	41	(1.7%)
Police Officer	36	(1.5%)	42	(1.8%)
Game & Fish/Agent/Specialist	35	(1.4%)	34	(1.4%)
Carpenter/Cabinetmaker	35	(1.4%)	39	(1.6%)
Agent/Purchasing/Marketing	33	(1.4%)	18	(.8%)
Fashion Designer	33	(1.4%)	33	(1.4%)
Veterinarian	33	(1.4%)	32	(1.3%)
Interior Designer	31	(1.3%)	37	(1.5%)
Forester	30	(1.2%)	28	(1.2%)
Total	1,690	(66.6%)	1,297	(54.1%)

*As listed on Career Interest Survey
**Combined total for four separate categories on Career Interest Survey.

Based on the data in Table 2, interest in the computer science field is the first choice of both high school juniors and current community college students. Although engineering fields are not the second most popular field in total for community college students, the comparison with high school student interest shows continued support for enrollment in that area. Unfortunately, the High School Student Career Interest Survey provided no specific choice for any of the electronics fields which account for 2.5% of the Fall 1982 students' curriculum intents.

For the secretarial field, high school student interest is higher than for that of college students. Further analysis would be required to determine if more of these high school students plan to go to work directly upon graduation from high school. If not, these high school students could exert enrollment pressure on course offerings in Office Education.

The interest in nursing occupations also deserves further analysis given the lower magnitude of high school student career interest in comparison with the curriculum intent of current students. During its history, the College has had a much higher number of students seeing themselves as being in a nursing program than who have actually been enrolled in a nursing course. Some of this has been due to the selective admissions policy for the allied health and nursing fields. However, if the first choice in career interest of eleventh graders is any indication, the percentage of students selecting the nursing field at Pima Community College may decline.

County Residents Survey

The responses by residents of Pima County to the survey of the educational needs showed positive interest in the College's programs and services. Of the 278 residents responding, 36% said they were currently enrolled or had been enrolled in the past and 61% indicated that they would enroll in the next two years if needed courses were offered at a suitable time and place.

Residents were asked to indicate the first, second and third most important reason that might lead them to enroll. As Table 3 indicates, general interest and upgrading job skills were clearly the first choice reasons. Second choice reasons in rank order of selection were retraining, upgrading and general interest. For third choice, general interest was again first, clearly out-distancing the next highest, retraining. By contrast, the reason, "Earn Credits for Transfer to 4-year college," stayed consistently low at around 11% as the first, second, and third choice for enrolling. Looking at reponses by spring semester 1983 students to a similar question on the application for admission, transfer was the first choice (25.6%), followed by upgrade/retraining (22.1%) and Other (21.6%).

Table 2

Comparison of High School Student Career Interests
and Pima Community College Student Curriculum Intents
in Selected Fields

High School Juniors Career Interest		Community College Student Curriculum Intent*	
Computer/Programmer/Other	7.1%	Computer Science (all fields)	7.9%
Engineer (all categories)	6.2%	Engineering (all fields)	5.6%
Secretary/All Kinds	3.8%	Office Education (all fields)	2.4%
Nurse/RN/LPN	3.0%	Associate Degree Nursing and Practical Nurse	5.5%
Accountant	2.6%	Accounting	2.6%

*Based upon Fall Semester 1982 curriculum intent indicated at the time of enrollment

Table 3

County Residents Reasons for Potentially Enrolling
as Compared with Current Students

Current Students*		County Residents First Choice		Second Choice		Third Choice	
25.6%	Earn Credits for Transfer to 4 year College	20	(11.7%)	15	(10.7%)	13	(10.7%)
16.3%	Training for Starting Employment	18	(10.6%)	8	(5.7%)	4	(3.3%)
22.1%	Upgrading of Present-Employment Job Skills	53	(31.2%)	38	(27.2%)	14	(11.6%)
	Retraining for Changing Jobs or or Position	10	(5.9%)	46	(32.9%)	34	(28.1%)
14.4%	General Interest--Courses for Self Improvement	63	(37.1%)	30	(21.4%)	51	(42.2%)
21.6%	Other	6	(3.5%)	3	(2.1%)	5	(4.1%)
100%	Total Indicating Choice	170	(100%)	140	(100%)	121	(100%)

*Based upon Spring Semester 1983 reason for enrolling as expressed on application for admission.

County residents completing the survey were asked to check the three programs which they would need most if they were to enroll. By contrast, when students enroll, they are asked to indicate a single program as their curriculum intent. Thus, in order to compare the interests of current students with those of county residents, the resident responses were reduced by the factor of multiple response. A review of Table 4 shows clearly that county residents identified specific programs more readily than current students of whom a third indicated general studies or special interests under General Education. In this particular analysis, programs for university transfer held the same level of interest in both groups. By contrast business, office education, computer science, and public service showed major increases in interest by county residents. Health sciences was the only occupational program not experiencing an increase in comparison with current students. If these residents were to follow through on their intent to enroll, their actions could cause the percentage of students enrolled in occupational programs to increase, continuing a trend which has occurred since the College opened.

Residents were also asked to identify any additional programs and/or courses which they needed that were not included in the list of current educational programs. Of the 31 persons who responded to the question, almost everyone of the courses and programs requested is already in the College's catalog, but perhaps under a slightly different heading. Some of the requested courses are offered on a non-credit basis through the Community Services office. Special requests not currently offered by the college included hydrology, operating room technology, purchasing, and telephone switchboard operation.

Respondents to the residents survey were given the opportunity of indicating the choice of location which would best satisfy their needs. Table 5 shows the percentage of the 167 replies identifying each of the four campuses. In addition, the portion of the fall semester 1982 duplicated headcount enrollment attending each campus is shown. If this survey represents the potential interest of future students in terms of location, the East Campus and the Community Campus appear to have the opportunity to benefit whereas the Downtown Campus enrollment should remain relatively constant and the West Campus enrollment should decline.

With regard to preferred times (Table 6), 18.6% indicated weekday morning or afternoon classes whereas 81.4% chose evening or weekend classes. In contrast, 42.5% of the fall 1982 students were day students, 35% were extended day students, and 22.5% were enrolled for both day and extended day classes. If county residents follow their stated preference, enrollment should shift from day to extended day classes.

When asked for their preferred methods of instruction, 41% of county residents indicated regular 15 week semesters, 36% chose

Table 4

Comparison of Current Student Curriculum Intents with County Residents Educational Program Interests

	Current Students*	Community** Residents
University Parallel	22.3%	21.3%
Occupational Programs		
Business	10.8%	20.1%
Office Education	2.4%	7.2%
Computer Science	7.9%	12.5%
Health Sciences	8.2%	7.2%
Home Economics	.0%	3.3%
Public Services	3.5%	6.5%
Technology	11.0%	11.8%
General Education	33.4%	10.1%

*Based upon Fall Semester curriculum intent indicated at the time of enrollment.

*Based upon residents expressed need for three programs adjusted for multiple response.

Table 5

Comparison of County Residents Choice of Campus
with Fall Semester Duplicated Headcount

	Residents Preference	Fall 1982 Duplicated Headcount
Community Campus	32.3%	21.5%
Downtown Campus	27.3%	26.4%
East Campus	24.6%	15.7%
West Campus	15.9%	36.3%

Table 6

County Residents Choice of Class Times in Comparison with Fall Semester Student Enrollment

County Residents' Preferences	
Morning Classes During Weekday	9.6%
Afternoon Classes During Weekday	9.0%
Evening Classes During Weekday	71.1%
Saturday Classes	10.3%

Current Student Enrollment*	
Day Classes Only (Weekday Mornings and Afternoons)	42.5%
Extended Day Classes Only (Evenings and Weekends)	35.0%
Both Day and Extended Day Classes	22.5%

*Based upon Fall Semester 1982 Official Enrollment Statistics.

short courses, and 22% selected open entry/open exit (Table 7). Given the fact that the overwhelming majority of sections are currently offered in the traditional 15 week format, the fact that over half of the county residents responding chose a non-traditional time frame deserves further attention.

A total of 125 of the county residents who responded indicated that they were interested in one or more student services and activities. Figure 2 lists the percentage of respondents selecting each item. Since multiple choices were encouraged the sum of the percentages exceeds one hundred percent. The responses are of interest not so much in terms of their absolute values but in the relationship among them. Clearly academic related interests, i.e., libraries and testing, take precedence over non-academic areas, i.e., athletics and social activities.

Residents showed a positive interest in courses offered through Community Services with 68% of those responding indicating they would have need during the next two years for non-credit courses. An extensive list of the kinds of non-credit courses for which residents said they would enroll has been compiled from the questionnaires for use by the Community Services Office.

While the Honors Program is a relatively new area at the College, 18% of the residents responding to the question anticipated a need for this program in their educational plans. Given the current scope of the Honors Program, this response indicates a possible expanding demand.

Classes by television were seen as part of the educational plan by 57 out of 167 residents (34%) who responded to the question. Of those who checked "yes," 85% indicated broadcast TV would meet their needs versus 15% who chose cable. Since cable television is currently available to only a portion of the county's residents and limited educational television programming is available, perhaps this question is an unfair comparison at this time. However, the magnitude of the preference for broadcast television is significant, indicating perhaps that residents will have to be drawn to cable by the courses offered if they are to choose this medium.

Major Employers Survey

The responses by major employers provided a substantial amount of information about their employment needs. Since each questionnaire was precoded with Standard Industrial Classification (SIC) Codes, the responses have been analyzed by the nine major industrial areas which comprise the SIC Code.

On an overall basis, the College enjoys a very positive relationship with major employers, especially among those employers who have hired people trained at the College. When

Table 7

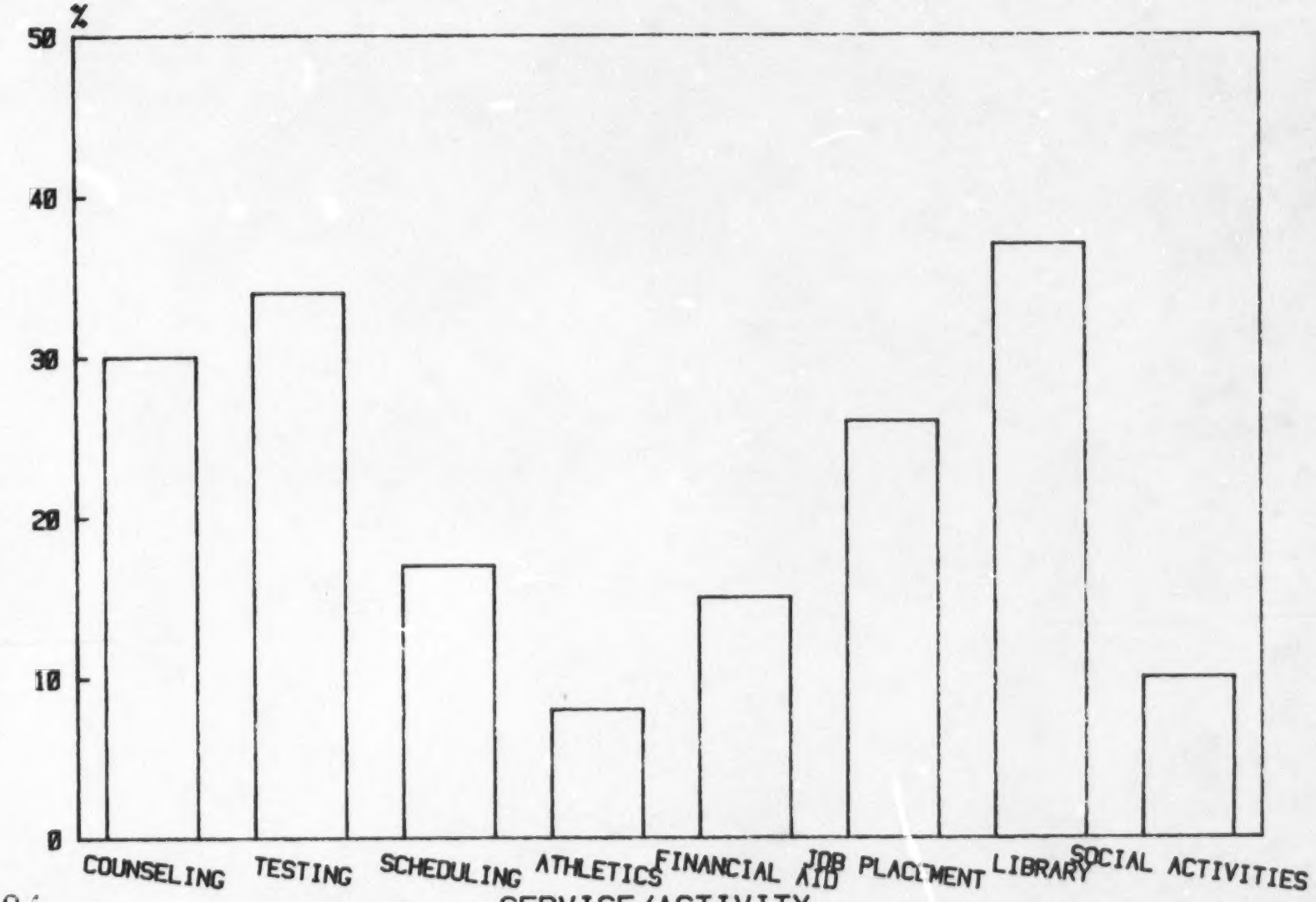
Comparison of County Residents Preferences for Methods of Instruction with Spring Semester FTSE Enrollment

County Residents Preferences	
Regular 15 week semester	41%
Short Courses (less than 15 weeks)	36%
Open Entry/Open Exit (Enter and complete and time during year)	22%
Other	1%

1982-83 Reported FTSE Enrollment	
Regular Semester	94%
Short Term Vocational Technical	5%
Open-Entry/Open Exit	1%

Figure 2

STUDENT SERVICES AND ACTIVITIES
NEEDED BY COUNTY RESIDENTS



this latter group was asked, "...were you satisfied with their training," 96% responded "yes". In addition, 73% of the major employers have employees currently attending the College and 78% also conduct their own educational programs or on-the-job training. Thus, major employers clearly recognize the importance of education and training.

Table 8 provides a look at how the various industrial areas responded to three questions related to their employment of and satisfaction with people who had received training at Pima Community College. Of the 148 respondents, 57% indicated they had hired people trained at the college during the past two to three years. Column one shows the response by each major industrial area.

When asked to identify specific positions they had hired people trained at Pima, an extensive list of job titles resulted. In order to obtain a picture of how this employment varied by industrial area, the total number of these positions identified by respondents in each industrial area were totalled and divided by the number of respondents to the questionnaire for that SIC. The figure in column two is the average number of positions per employer in that category for which people trained at the College were hired. The number is lowest for the mining and construction industry and highest for the services field which includes health and education.

The third column in Table 8 gives the percentage of employers in each industrial area who indicated satisfaction with the quality of the College's occupational programs. A comparison of the three columns shows that industries which employ people trained at Pima tend to be more satisfied with the College's occupational programs. The manufacturing area which includes electronics, and the services area which includes health and education, have the first and second highest percentages of respondents using people trained at Pima and the first and third highest levels of satisfaction. Overall the percentage of all respondents expressing satisfaction was the same in this survey as in the 1980 survey.

In a further effort to assess the satisfaction of major employers with College programs, the responses of <u>only</u> those employers who have hired Pima people were analyzed in terms of their answers to the question regarding satisfaction with the College's occupational programs. Their responses were as follows:

Satisfied	57.6%
Uncertain	24.7%
Need Improvement	9.4%
No Reply	8.2%

Clearly, those employers who hire people trained at the College are pleased with our occupational programs. However, these

Table 8

Employment of People Trained at
Pima Community College by Major SIC Area

SIC*	Title	Hired People Trained at Pima	Average Number of Positions	Satisfaction with Programs
1	Mining and Construction	41.9%	.58	25.0%
2	Manufacturing including Agricultural Materials, Chemicals & Oil	50.0%	.75	37.5%
3	Manufacturing including Electronic Equipment	76.9%	1.23	69.3%
4	Transportation	45.5%	.82	63.7%
5	Wholesale and Retail Trade	59.1%	1.41	59.1%
6	Finance, Insurance, and Real Estate	60.0%	1.27	60.0%
7	Service Businesses	47.1%	1.06	41.2%
8	Services including Health and Education	69.4%	1.63	52.8%
9	Public Administration	42.9%	1.07	50.0%
	TOTALS	57.4%	1.22	52.0%

*Standard Industrial Classification

degrees of satisfaction can also serve as a base for determining objectives for levels of improvement between now and the next time the major employers survey is conducted.

In order to understand some of the dynamics of the Pima County labor market, employers were asked to indicate whether they were having any current difficulties in locating qualified applicants for some positions. Their responses were: much difficulty, 9%; some difficulty, 40%; and no difficulty, 51%. Figure 3 provides a look at responses to this question by industrial area. It is interesting to note that the two areas indicating the greatest difficulty, service business and transportation, are not the same as those areas employing the mort people trained at Pima. The list of specific positions which employers indicated as somewhat or much difficult to fill is extensive. However, most are single entries. Experienced electrical engineers and medical transcribers have the highest number of citations with five each.

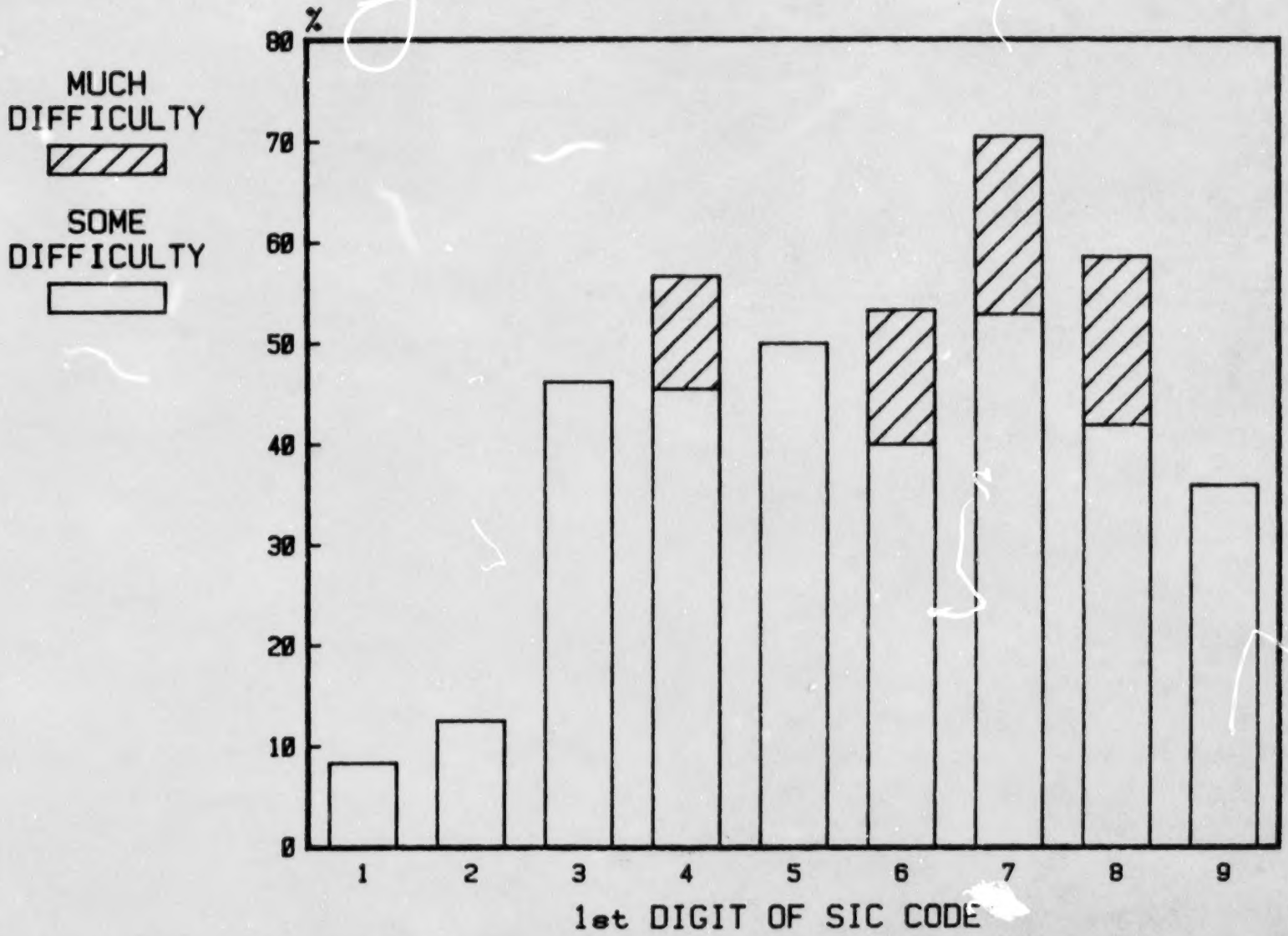
Another question asked employers was whether too many people were being trained for some positions. Twenty one percent of all respondents said "yes." The response by industrial area is shown in Figure 4. Several sharp contrasts are evident. Certain industries are high on both figures and some are high on one and low on the other. The list of actual positions for which the labor market was felt to be flooded is extensive, consists mostly of single entries with no major clustering of positions.

Major employers were provided a list of the titles of the College's programs for direct employment and asked to underline all programs which they felt were related to their employees' activities. The 87 programs were rank ordered in terms of the number of responses. Table 9 lists the top 23 programs in rank order by number of responses and percentage of employers selecting that program. The list clearly indicates the importance of business management, office education and computer science fields to these major employers. Some caution might be necessary in interpreting these responses. The listing of the 87 programs was in three columns on the questionnaire. A significantly higher selection of programs occurred in the first column in comparison with the technology programs in the third column which includes electronics. Perhaps some respondents, after having underlined several programs in the first column, tired or felt less inclined to read through the remaining two columns.

The questionnaire provided an opportunity for the employer to suggest additional occupational programs which the College might offer. In most instances, the College already offers courses or programs in the field, perhaps under a slightly different title. For those programs which the College does indeed not offer, all were single requests.

Figure 3

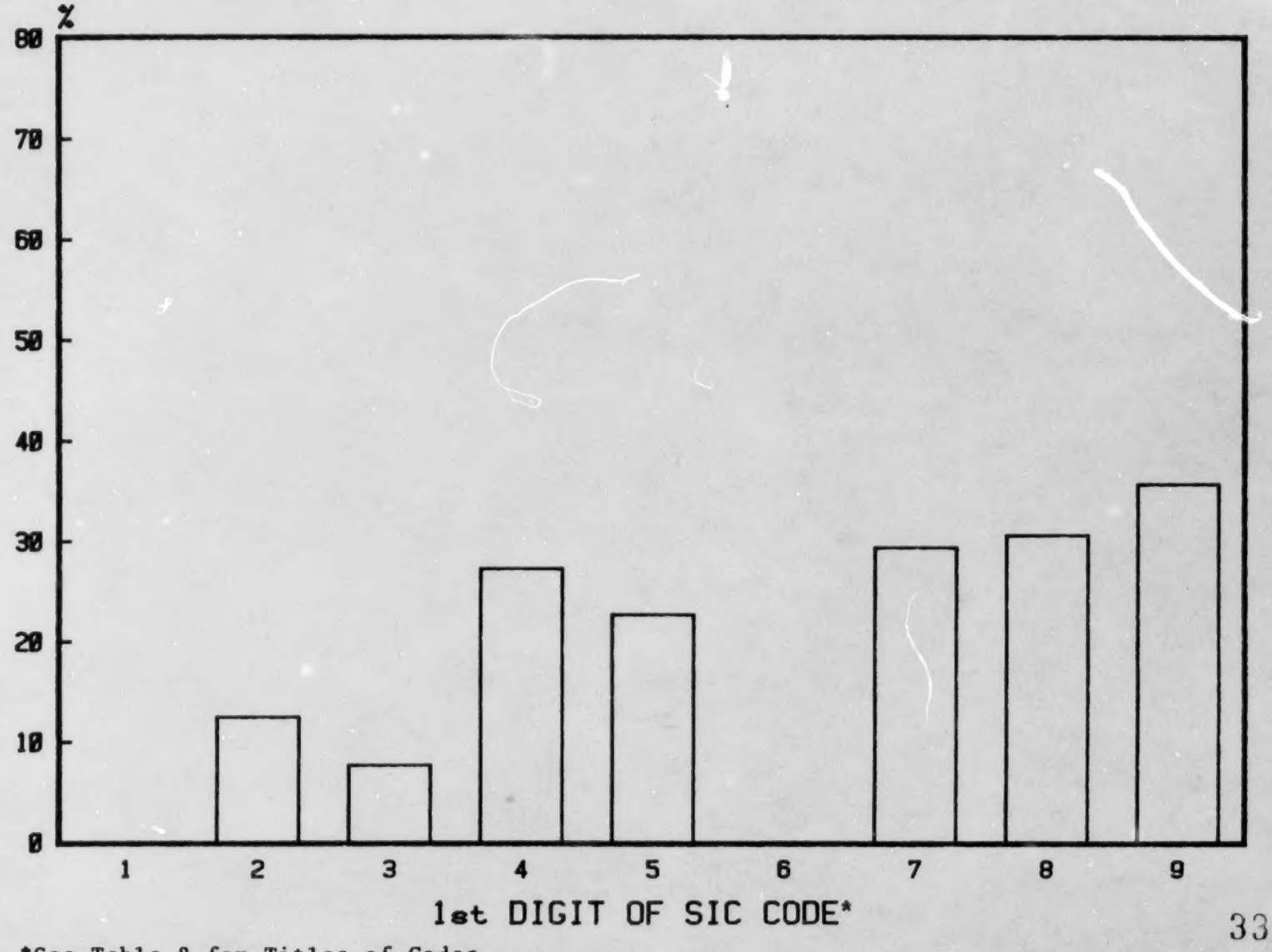
EMPLOYERS HAVING DIFFICULTY
LOCATING APPLICANTS BY SIC AREA



*See Table 8 for Titles of Codes

Figure 4

EMPLOYERS INDICATING PEOPLE FLOODING MARKET BY SIC AREA



*See Table 8 for Titles of Codes

Table 9

Pima Community College Programs
Selected by Employers as Being Related to
Activities of Employees

Accounting	91	(72%)
Clerk-Typist	81	(64%)
Secretary, General	76	(60%)
Business Administration/Management	65	(52%)
Data Entry Operator	65	(52%)
Computer Operator	61	(48%)
Secretary (Exec., Legal, Medical)	56	(44%)
Receptionist (General, Legal, Medical)	53	(42%)
Records Management	51	(40%)
Administrative Assistant	48	(38%)
Computer Programmer/Analyst	43	(34%)
Secretary, Bilingual	41	(33%)
Systems Programmer	40	(32%)
Restaurant, Culinary and Food Management	37	(30%)
Business Administration/Marketing	30	(24%)
Welding	22	(17%)
Air Conditioning	22	(17%)
Associate Degree Nursing	22	(17%)
Nursing Assistant	21	(17%)
Practical Nurse	20	(16%)
Transportation and Traffic Management	20	(16%)
Automotive Mechanics	20	(16%)
Social Services	20	(16%)

Four College organizational efforts, Community Services, Institute, Cooperative Education and Skill Center, were mentioned in the questionnaire in order to see to what extent major employers are aware of them. Table 10 lists the percentage of "yes" responses to each question by SIC. It is interesting to note the closeness in the overall awareness for the Institute, Cooperative Education and the Skill Center. Responses for each SIC should be studied in comparison with the level of effort being applied to serving each industrial area. No doubt the high level of awareness about the Institute in the manufacturing area which includes electronics is due to the work being done with the Airport Consortium.

In a further effort to determine employer needs, the College's Office of Community Relations identified and attempted to contact 34 high technology firms, both small and large, in Pima and Santa Cruz County regarding their expected hires for this year in all employment fields. Fourteen firms gave specific estimates which total 1,897 expected hires. Another fourteen fimrs indicated they would be expanding their employment this year but gave no specific numbers. The results of this telephone survey are in the appendices.

Conclusion

Findings

The information collected in the three surveys provides information for use by College and Campus Planning Committees, as well as to faculty and administrators. The interest expressed by high school students and by county residents regarding various college programs provides information to support decisions regarding the College's curriculum. The interest of employers in college educational programs and in employing people trained by the College can likewise guide educational planning.

The increasing interest expressed by high school students in attending a community college as they complete secondary school indicates a continuing supply of enrollment for the College from this source. While it is not possible to determine exactly what is causing this increased interest, current high school relations efforts must be a positive factor.

The fact that two thirds of the eleventh graders first choice for career interest were in 28 fields indicates potential increased demand for courses and programs which support these fields. Demand would appear to continue strong for mathematics and science courses which support computer science and engineering majors. Current high interest in these fields should continue to support current increases in staffing. Traditional community college occupational programs in accounting and office education should also continue their current high level of enrollment.

Table 10

Employers Awareness of
Certain College Programs
by SIC Area

SIC*	Community Services	Institute	Cooperative Education	Skill Center
1	91.7%	58.3%	41.7%	33.3%
2	100%	75.0%	50.0%	62.5%
3	100%	92.3%	69.2%	76.9%
4	72.7%	63.6%	81.8%	54.5%
5	72.7%	68.2%	54.5%	50.0%
6	86.7%	73.3%	73.3%	73.3%
7	76.5%	35.3%	58.8%	41.2%
8	88.9%	75.0%	75.0%	83.3%
9	71.4%	64.3%	78.6%	57.1%
Total	83.8%	67.6%	66.2%	62.2%

*See Table 8 for Standard Industrial Classification Titles.

The positive support of County residents for the College and their general desire to take advantage of programs and services offered is encouraging. Their interest in occupational programs and in upgrading and retraining indicates continued enrollment growth in those fields. A broad difference exists, however, between county residents and current students in terms of choice of location, preferred times, and preferred methods of instruction.

The interest expressed in terms of preferred location needs to be considered as resources are allocated among the campuses. In some ways, the level of these responses confirm campus enrollment trends over the last several years. No doubt certain programs will need to be located on the West Campus to continue to draw enrollment to that campus. However, given the westward movement of the center of population of Tucson due to home construction to the northwest along I-10 and to the southwest along I-17, the West Campus needs to have the capacity to serve these new westside residents in the future when they seek community college services at the closest campus to them.

Given the question regarding classes by television, the College needs to recognize the current overwelming interest in broadcast television over cable television. Efforts to develop this educational delivery system will need to consider using both types of transmission.

The hiring by major employees of people trained at the College and their satisfaction with the College's occupational programs varies substantially among the nine major Standard Industrial Classification areas. It is encouraging to note that those areas in which the higher percentage of firms employing people trained at the College also had the higher percentage of firms expressing satisfaction with the College's occupational programs.

The types of programs identified by major employers as related to their employees activities confirm the College's efforts in those fields. It would appear that these traditional community college occupational programs in business, accounting and office education will continue to be important to employers.

Recommendations

The results of the three surveys and the analysis of the data leads to certain conclusions and suggestions for action:

1. Since interest in attending a community college is lower among ninth graders than twelfth graders, high school recruitment efforts should be analyzed regarding where to concentrate resources for the greatest impact.

2. Support for the expansion or contraction of offerings in various subject areas should be guided in part by the level of interest in each field as expressed by high school students, particularly when efforts are made to maintain an appropriate balance of offerings in comparison to student interest.

3. College planning efforts should recognize the continuing shift in the share of enrollment going into occupational programs.

4. Further interest in enrolling at the East Campus would appear to support the expansion of facilities at this location.

5. The higher interest of county residents in evening classes and in different scheduling formats should guide future master schedule development.

6. Given the apparent relationship between hiring people trained at the College and employer satisfaction with the College's occupational programs, further study should be made of the low response industrial areas to see if there are ways to increase hiring and satisfaction.

7. As the College shifts resources to develop new educational programs, it will be important to look at the relative importance of existing programs to major employers as one means of determining which ones should be maintained at current levels.

8. The College should use the level of responses to certain questions as a bench mark from which to set objectives for levels of improvement.

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SURVEY QUESTIONNAIRES

CAREER INTEREST SURVEY

Information provided in completing this survey is voluntary and will be used by guidance counselors, other school district personnel and Exploring. This information will be treated as confidential.

INSTRUCTIONS: Please print one letter or number in each square, skipping one square for spacing. Select two career interests and enter their code numbers in order of first and second choice. Also select two recreational interests and enter their code numbers in the recreational interest space.

PLEASE PRINT CLEARLY ABBREVIATE IF NECESSARY TO FIT BOXES.

LAST NAME | FIRST NAME | INITIAL | HIGH SCHOOL STUDENT NO.

STREET ADDRESS | CITY | ZIP CODE

HOME PHONE | PRESENT GRADE (Enter number) | MALE-FEMALE (M-F) | SCHOOL CODE (see reverse side)

THE 1st YEAR AFTER HIGH SCHOOL GRADUATION I PLAN TO:

1 Go to community college (2 yr.)
2 Go to university (4 yr.)
3 Attend voc-tech school
4 Work full time
5 Enter military service
6 Other or no plan

Enter most appropriate number

CAREER INTERESTS CHOICES — FIRST SECOND

RECREATIONAL INTERESTS CHOICES — FIRST SECOND

(See section at bottom of survey)

CAREER INTERESTS

AGRI-BUSINESS & NATURAL RESOURCES
01 Air Pollution Technologist
02 Farmer/Rancher
03 Forestor
04 Game & Fish/Agent/Specialist
05 Horticulturist
06 Lanscaper/Gardener
07 Soil Scientist
08 Water Pollution Technologist
09 Zoo Manager/Curator

ARTS & ARCHITECTURE
10 Architect
11 Fashion Designer
12 Industrial Designer
13 Interior Designer
14 Photographer

BUSINESS & ADMINISTRATION
15 Accountant
16 Advertising & PR Person
17 Agent/Purchasing/Marketing
18 Auto Business Person
19 Banker
20 Contractor
21 Manager/Motel/Hotel
22 Military Officer
23 Parks Manager/Co./ State/Fed.
24 Real Estate/Agent/Appraiser
25 Restaurant Manager
26 Sales Person/Retail/Wholesale
27 Secretary/All Kinds
28 Small Business Owner

COMMUNICATIONS
29 Commercial Artist/Illustrator
30 Computer/Programmer/Other
31 Drafting Specialist
32 Printer/Graphic Artist
33 Radio/Broadcaster/Producer
34 Reporter/Journalist/Editor
35 Telephone/Operator/Technician
36 TV/Broadcaster/Producer

CONSTRUCTION
37 Bricklayer/Mason
38 Carpenter/Cabinetmaker
39 Electrician
40 Heating & Air Cond. Specialist
41 Heavy Equipment Operator
42 Machinist/Metal Maker
43 Painter/Plasterer
44 Plumber
45 Steel Worker/Welder

ENGINEERING
46 Archeologist
47 Biologist
48 Chemist
49 Ecologist
50 Engineer/Civil
51 Engineer/Electrical
52 Engineer/Mechanical
53 Engineer/Nuclear/Solar
54 Geologist
55 Mathematician
56 Oceanographer
57 Physicist/Space Scientist
58 Sociologist

FINE ARTS & HUMANITIES
59 Actor/Actress
60 Dancer
61 Designer/Costume/Set
62 Model
63 Movies/Producer/Director/Other
64 Music/Performer/Composer
65 Painter
66 Sculpter
67 Writer/Critic

HEALTH SERVICES
68 Dentist/Technician
69 Dietician
70 Doctor/General/Specialist
71 1st Aid & Rescue Spec.
72 Mortician
73 Nurse/RN/LPN
74 Optomotrist
75 Pharmacist
76 Physical Therapist
77 Psychologist
78 Technical/Lab/X-Ray
79 Veterinarian

PUBLIC SERVICES
80 Firefighter
81 Lawyer/Para-Legal
82 Police Officer
83 Recreation Leader

SERVICE TRADE
84 Aviation Mechanic
85 Barber/Beautician
86 Chef
87 Child Care Specialist
88 Home Economist
89 Mechanic/Auto/Diesel
90 Service Person/Radio & TV/Appliance

SOCIAL SERVICES
91 Minister/Priest/Rabbi
92 Librarian
93 Pro Athlete/Coach
94 School/Teacher/Counselor/Admin.
95 Social Worker/Probation Officer

TRANSPORTATION
96 Flight Attendant
97 Airplane/Pilot/Navigator
98 Ship/Pilot/Navigator
99 Trucker

RECREATIONAL INTERESTS

01 Archery
02 Astronomy
03 Auto Repair
04 Auto Sports/Road Rallying
05 Backpacking & Hiking
06 Badminton
07 Baseball/Softball
08 Basketball
09 Bicycling
10 Boating/Power
11 Bowling
12 Camping
13 Canoeing/Kayaking
14 Cartooning
15 Ceramics
16 Chess
17 Citizen's Band Radio/Ham Radio
18 Clownery
19 Coin Collecting
20 Cooking/Baking
21 Creative Writing/Poetry
22 Dancing
23 Distance Running
24 Electronics-Stereo/Hi-Fi
25 Fencing
26 Fishing
27 Flying/Soaring
28 Football
29 Gardening/House Plants
30 Golf
31 Gourmet Cooking
32 Gymnastics
33 Handball/Racketball
34 Horseback Riding
35 Ice Skating/Hockey
36 Italian Dancing & Culture
37 Macrame/
38 Martial Arts
39 Model Building-Airplanes/Ships/Other
40 Model Railroading
41 Motorcycling/Dirt Bikes
42 Mountaineering
43 Music-Vocal/Instrumental
44 Painting
45 Photography
46 Pottery
47 Public Speaking
48 Rock Collecting/Lapidary
49 Sailing/Seamanship
50 Scuba Diving/Skin Diving
51 Sewing/Crocheting/Knitting
52 Shooting-Rifle/Trap/skeet/Pistol
53 Skiing-Downhill/Cross Country
54 Soccer
55 Spelunking (Cave Exploring)
56 Stamp Collecting
57 Swimming/Diving
58 Taxidermy
59 Tennis
60 Track & Field
61 Volleyball
63 Water Skiing
63 Weight Lifting
64 Woodworking
65 Wrestling

Si necesita ayuda para contestar este cuestionario, por favor llame a la oficina de Estudios Bilingües e Internacionales al 884-6670. Gracias por su cooperación.

PIMA COUNTY COMMUNITY COLLEGE DISTRICT
OFFICE OF INSTITUTIONAL RESEARCH

2202 West Anklam Road
Tucson, Arizona 85709

SPRING 1983 SURVEY OF COUNTY RESIDENTS

In keeping with the "Emphasis on Excellence" theme of Pima Community College and its commitment to quality education, information must be gathered periodically about residents' educational and training needs. We are therefore asking you to assist us by completing this questionnaire.

The information collected from this survey will be used for research reporting purposes, and the results released only in statistical form. No individual responders will be identified.

You may, if you wish, either complete this form and mail it back to us using the pre-addressed paid envelope or call Mr. Russell Collmer (at 884-6934), Director of the Institutional Research Office, and he will complete the form during the phone conversation.

Please answer the survey questions as being applicable only to you, except for those questions which are applicable to others in your family unit.

The survey questionnaire is designed so that if you have no needs for Pima Community College educational and training services, you should still respond to the survey. Unless persons who have no needs for Pima Community College services so answer in their response, the survey results will be biased with an overstatement of residents' needs.

Please return your completed questionnaire before Tuesday, March 29, using the enclosed postage-paid envelope. THANK YOU FOR YOUR HELP!

Responder's Name _____ Zip Code _____

SECTION A -- YOUR NEEDS FOR PIMA COMMUNITY COLLEGE EDUCATIONAL AND TRAINING SERVICES

1. Would you enroll at Pima Community College in the next two years if courses you needed were offered at a suitable time and location? 278

61% ☐ Yes 39% ☐ No

If NO, please turn to page 4.

2. If you did enroll at the College, would you be? 144

5% ☐ Full-time 95% ☐ Part-time

3. Please rank three reasons you might enroll using an entry of a 1 as the most important, an entry of a 2 as the second most important, and 3 as the third most important. 170

23% ☐ Earn Credits for Transfer to a 4-Year College
13% ☐ Training for Starting Employment
69% ☐ Upgrading of Present-Employment Job Skills
53% ☐ Retraining for Changing Jobs or Position
85% ☐ General Interest -- Courses for Self-Improvement
8% ☐ Other (specify) (36 chd only 1, 15 chd only 2, + 96 chd 3 most important)

4. Have you ever enrolled as a student at Pima Community College? 171

45% ☐ No 15% ☐ Currently Enrolled 40% ☐ Enrolled in Past Semesters

PLEASE CONTINUE, NEXT PAGE ➡

5. The following is a list of programs, representing groups of courses, which Pima Community College now offers. Please look over the list and check [x] the three programs which you most need if you were to enroll at the College. Please check not more than three programs.

150

DISTRICT EDUCATIONAL PROGRAMS

PROGRAMS FOR UNIVERSITY TRANSFER

19% ☐ Anthropology
27% ☐ Art, Fine
0 ☐ Automotive Technology
19% ☐ Biology (Pre-Dental, Med., Vet.)
11% ☐ Business Administration
5% ☐ Chemistry
0 ☐ Corrections
0 ☐ Criminal Justice
19% ☐ Drama
5% ☐ Education (Early Childhood, Pre-Elem, Pre-Secondary)
9% ☐ Electronics Technology
0 ☐ Engineering, Aerospace/Mechanical
19% ☐ Engineering, Agricultural
17% ☐ Engineering, Chemical
37% ☐ Engineering, Civil
5% ☐ Engineering, Electrical
39% ☐ Engineering, Geological/Mining
17% ☐ Engineering, Metallurgical
37% ☐ Geology
0 ☐ Journalism
37% ☐ Liberal Arts and Sciences
77% ☐ Mathematics
19% ☐ Music
0 ☐ Physical Education
39% ☐ Physics
47% ☐ Public Administration
0 ☐ Pre-Agriculture
24% ☐ Pre-Medical Technology and Microbiology
0 ☐ Pre-Pharmacy
0 ☐ Recreation Education
39% ☐ Speech

OTHER PROGRAMS

6% ☐ General Studies
17% ☐ Special Interest
7% ☐ Program Not Listed

PROGRAMS FOR DIRECT EMPLOYMENT

Business
18 ☐ Accounting
3 ☐ Banking
6 ☐ Business Administration/Management
5 ☐ Business Administration/Marketing
2 ☐ Credit Union
0 ☐ Fast Food Industry
2 ☐ Hotel-Motel Operations
0 ☐ Housekeeping-Executive
1 ☐ International Business Communications
1 ☐ Real Estate Escrow
5 ☐ Real Estate Sales/Brokerage
1 ☐ Restaurant, Culinary and Food Management
0 ☐ Savings and Loan
0 ☐ Transportation and Traffic Management
3 ☐ Travel Agent
1 ☐ Travel-Tour Agency Manager

Office Education
1 ☐ Administrative Assistant
3 ☐ Clerk-Typist
2 ☐ Secretary (Exec., Legal, Medical)
3 ☐ Secretary, Bilingual
3 ☐ Secretary, General
9 ☐ Receptionist (Gen., Legal, Medical)
1 ☐ Records Management

Computer Science
11 ☐ Computer Operator
11 ☐ Computer Programmer/Analyst
3 ☐ Data Entry Operator
11 ☐ Small Business Computer Specialist
5 ☐ Systems Programmer

Health Sciences
2 ☐ Allied Health Services
1 ☐ Associate Degree Nursing
6 ☐ Dental Assisting Technology
0 ☐ Dental Laboratory Technology
8 ☐ Emergency Medical Technology
1 ☐ Nursing Assistant
2 ☐ Ophthalmic Dispensing Technology
2 ☐ Practical Nurse
0 ☐ Radiologic Technology
0 ☐ Respiratory Therapy

Home Economics
10 ☐ Home Economics Careers

Public Services
0 ☐ Corrections
1 ☐ Criminal Justice
4 ☐ Early Childhood Education
0 ☐ Institutional Food Service
3 ☐ Interpreter Training
3 ☐ Legal Assistant
0 ☐ Natural Resource Recreation
1 ☐ Postal Service Management
1 ☐ Public Transportation Maintenance Technician
0 ☐ Recreation Leader
3 ☐ Sign Language
1 ☐ Social Services
1 ☐ Social Services (Substance Abuse)
6 ☐ Training for Special Education
0 ☐ Youth Care

Technology
1 ☐ Advertising Art
1 ☐ Air Conditioning
1 ☐ Air Conditioning, Heating, Ventilation
1 ☐ Air Conditioning and Sheet Metal
1 ☐ Applied Arts
0 ☐ Applied Design
1 ☐ Apprentice Related Instruction
1 ☐ Archaeological Field Work
0 ☐ Automotive Engine Repair
1 ☐ Automotive Mechanics
1 ☐ Automotive Power Transmission
0 ☐ Automotive Suspension and Brakes
1 ☐ Automotive Tune-up and Air Conditioning
0 ☐ Automotive Technology
2 ☐ Aviation Mechanics
3 ☐ Building Technology
3 ☐ Drafting, Architectural
3 ☐ Drafting, Electro-Mechanical
3 ☐ Drafting, Mechanical
2 ☐ Electronics, Communications
3 ☐ Electronics, Consumer
7 ☐ Electronics, Digital
2 ☐ Electronics, General
3 ☐ Electronics, Industrial
1 ☐ Electronics, Television Repair
1 ☐ Graphic Technology
1 ☐ Landscape Technician
1 ☐ Machine Tool Technology
0 ☐ Media Technology
1 ☐ Microelectronic Technician
0 ☐ Sheet Metal
0 ☐ Wastewater Technology
4 ☐ Welding

6. Please identify any additional programs and/or courses which you need that are not included in the above listing.

31

Additional Needed Programs	Additional Needed Courses
52% (16) 1 program	9% (3) 4 programs
37% (11) 2 programs	2% (1) 5 programs

7. Pima Community College offers a choice of four campuses with flexibility in scheduling and 167 method of instruction. Select from each of the following categories the choice that would best satisfy your needs.

Location

27% ☐ Downtown Campus (50 W. Speedway Blvd.)
25% ☐ East Campus (8202 E. Poinciana Drive)
16% ☐ West Campus (2202 W. Anklam Road)
32% ☐ Community Campus (Numerous locations which include area schools, hospitals, banks, community centers, etc.)

166 Times

10% ☐ Morning Classes during Weekday
9% ☐ Afternoon Classes during Weekday
71% ☐ Evening Classes during Weekday
10% ☐ Saturday Classes

158 Method of Instruction

41% ☐ Regular 15 week semester
36% ☐ Short Courses (less than 15 weeks)
22% ☐ Open Entry/Open Exit (Enter and complete any time during year)
1% ☐ Other _____

8. Numerous College student services and activities are available to respond to your needs. From 125 the following list select those which may be of service to you.

30% ☐ Assistance in choosing a program/career
34% ☐ Evaluation of current skills (testing)
17% ☐ Assistance in planning coursework
8% ☐ Athletic programs
15% ☐ Financial Aid application assistance
26% ☐ Job placement
37% ☐ Library facilities
10% ☐ Social activities and clubs
8% ☐ Other _____

9. Many courses are offered through Community Services which are not for College course credit and 156 require no formal registration or transcripts. These courses are designed to meet the personal needs and interests of residents for self improvement, employment, and leisure.

Would you have a need during the next two years for such courses?
68% ☐ Yes 32% ☐ No

90 If YES, list those kinds of courses for which you would enroll.

35% 1 Kind 24% 3 Kinds 5% 5 Kinds 1% 9 or more Kinds
31% 2 Kinds 2% 4 Kinds 3% 6 Kinds

10. The Pima College Honors Program offers recognition, financial aid incentives, and enriched 162 educational experiences such as independent studies, seminars, and special projects to academically gifted students. Do you anticipate a need for this program in your educational plans?
18% ☐ Yes 82% ☐ No

11. Do you foresee a need in your educational plans to take Pima Community College classes by 167 television?
34% ☐ Yes 66% ☐ No

If YES, check the system of TV that would fulfill your needs.

59
85% ☐ Broadcast (Commercial and Education)
15% ☐ Cable

PLEASE CONTINUE, NEXT PAGE ➡

SECTION B -- YOU, AS AN INDIVIDUAL

The following information is needed so that the analysis of survey results can show statistical representativeness of survey responders compared with all County residents.

274 1. Select your age group from the following list.

- 0 ☐ Less than 20 years
- 29% ☐ 20-29 years
- 20% ☐ 30-39 years
- 13% ☐ 40-49 years
- 16% ☐ 50-59 years
- 22% ☐ 60 and above

275 2. Your gender.

- 49% ☐ Male
- 51% ☐ Female

273 3. Your ethnicity/race.

- 5% ☐ American Indian
- 1% ☐ Asian
- 4% ☐ Black
- 20% ☐ Hispanic
- 70% ☐ White and Other

268 4. Your family unit annual income

- 10% ☐ Under $5,000
- 17% ☐ $5,000-$9,999
- 28% ☐ $10,000-$19,999
- 21% ☐ $20,000-$29,999
- 24% ☐ $30,000 and above

SECTION C -- YOUR COMMENTS AND SUGGESTIONS:

69

29 % (20) Favorable comments

32% (22) Neutral comments

39 % (27) Expressing concern

THANK YOU FOR YOUR HELP AND RESPONSE!

PLEASE RETURN YOUR COMPLETED QUESTIONNAIRE BEFORE TUESDAY, MARCH 29, USING THE ENCLOSED POSTAGE-PAID ENVELOPE.

Survey Number_____ SIC Code_____

PIMA COUNTY COMMUNITY COLLEGE DISTRICT
OFFICE OF INSTITUTIONAL RESEARCH
2202 West Anklam Road
Tucson, Arizona 85709

SPRING 1983 SURVEY OF PIMA COUNTY MAJOR EMPLOYERS

In keeping with the "Emphasis on Excellence" theme of Pima Community College and its commitment to quality education, we need to gather information periodically about your educational and training needs and desires. We are therefore asking you to assist us in completing this questionnaire. Please return your completed questionnaire before Monday, March 28.

The information collected from this survey will be used for research reporting purposes, and the results released only in statistical form. No individual employers will be identified.

You may, if you wish, either complete this form and mail it back to us using the pre-addressed paid envelope or call Mr. Russell Collmer (at 884-6934), Director of the Institutional Research Office, and he will complete the form during the phone conversation.

THANK YOU FOR YOUR HELP!

148 1. The approximate average number of your employees on the monthly payroll is
28% ☐ Below 100 40% ☐ 100 - 249 11% ☐ 250 - 499 7% ☐ 500 - 999 14% ☐ 1,000 or more

146 2. Are you having any current difficulties in locating qualified applicants for some positions?
9% ☐ Much difficulty 46% ☐ Some difficulty 51% ☐ No difficulties
Please identify the position vacancies for which you have any difficulty in filling:

Positions Much Difficult to Fill		Positions Somewhat Difficult to Fill	
(12)	1 position	(24)	2 positions
(5)	2 positions	(6)	3 positions
(3)	3 positions	(2)	4 positions
(1)	5 positions	(1)	5 positions
(2)	6 positions	(1)	8 positions

3. 138 From your recent job applicants do you find there are too many people being trained for some positions, and thus flood the labor market? 22% ☐ Yes 78% ☐ No
If "Yes", for what positions are trained applicants flooding the labor market?

(16)	1 position		
(10)	2 positions		
(4)	3 positions		

4. 139 During the past two or three years have you hired any people trained at Pima Community College? 61% ☐ Yes 39% ☐ No
If "Yes", for what positions have you hired people trained at Pima Community College?

(33)	1 position	(3)	5 positions
(19)	2 positions	(1)	7 positions
(18)	3 positions		
(6)	4 positions		

5. 82 If during the past two or three years you have hired people trained at Pima Community College, were you satisfied with their training? 96% ☐ Yes 4% ☐ No
If "No", how do you think their training could be improved? _____

(2) comments
(146) NR

134 6. Do you have employees currently attending Pima Community College? 73% ☐ Yes 27% ☐ No

141 7. Does your company conduct any educational programs or formal on-the-job training for employees? 78% ☐ Yes 22% ☐ No

PLEASE COMPLETE NEXT PAGE, TOO. ➡

8. The following list shows the occupational education programs now being offered by Pima Community College. Please underline all programs that you feel are related to your employees' activities:

126

PROGRAMS FOR DIRECT EMPLOYMENT

%		Business
72	100	Accounting
13	106	Banking
52	102	Business Administration/ Management
24	104	Business Administration/ Marketing
2	107	Credit Union
8	108	Fast Food Industry
8	110	Hotel-Motel Operations
11	111	Housekeeping-Executive
11	119	International Business Communications
8	113	Real Estate Escrow
4	112	Real Estate Sales/Brokerage
30	117	Restaurant, Culinary and Food Management
6	114	Savings and Loan
16	118	Transportation and Traffic Management
2	115	Travel Agent
2	116	Travel-Tour Agency Manager
		Office Education
38	150	Administrative Assistant
64	151	Clerk-Typist
44	160	Secretary (Exec., Legal, Medical)
33	158	Secretary, Bilingual
60	154	Secretary, General
42	153	Receptionist (Gen., Legal, Medical)
40	159	Records Management
		Computer Science
41	201	Computer Operator
34	203	Computer Programmer/Analyst
52	204	Data Entry Operator
9	205	Small Business Computer Specialist
32	202	Systems Programmer

%		Health Sciences
12	260	Allied Health Services
17	258	Associate Degree Nursing
2	250	Dental Assisting Technology
1	262	Dental Laboratory Technology
13	251	Emergency Medical Technology
17	253	Nursing Assistant
3	255	Ophthalmic Dispensing Technology
16	252	Practical Nurse
10	257	Radiologic Technology
7	259	Respiratory Therapy
		Home Economics
5	305	Home Economics Careers
		Public Services
3	402	Corrections
6	404	Criminal Justice
10	411	Early Childhood Education
10	417	Institutional Food Service
2	412	Interpreter Training
2	418	Legal Assistant
2	405	Natural Resource Recreation
0	415	Postal Service Management
3	419	Public Transportation Maintenance Technician
12	406	Recreation Leader
6	420	Sign Language
16	407	Social Services
7	409	Social Services (Substance Abuse)
8	416	Training for Special Education
9	414	Youth Care

%		Technology
6	525	Advertising Art
17	526	Air Conditioning
14	527	Air Conditioning, Heating, Ventilation
10	528	Air Conditioning and Sheet Metal
1	529	Applied Arts
2	530	Applied Design
1	539	Apprentice Related Instruction
1	531	Archaeological Field Work
13	532	Automotive Engine Repair
16	504	Automotive Mechanics
10	533	Automotive Power Transmission
10	534	Automotive Suspension and Brakes
11	535	Automotive Tune-up and Air Conditioning
9	505	Automotive Technology
4	506	Aviation Mechanics
2	542	Building Technology
8	502	Drafting, Architectural
11	536	Drafting, Electro-Mechanical
14	541	Drafting, Mechanical
10	519	Electronics, Communications
0	520	Electronics, Consumer
12	521	Electronics, Digital
13	537	Electronics, General
10	522	Electronics, Industrial
2	538	Electronics, Television Repair
5	523	Graphic Technology
6	543	Landscape Technician
5	518	Machine Tool Technology
5	514	Media Technology
6	544	Microelectronic Technician
9	515	Sheet Metal
4	540	Wastewater Technology
17	517	Welding

Please list the names of any programs offered at Pima Community College about which you would like more information.

(6) 1 program
(4) 2 programs
(3) 3 programs
(1) 4 programs
(3) 7 programs

9. What additional occupational education programs do you suggest that Pima Community College offer to meet your existing or future employment needs?

25

(13) 1 program
(7) 2 programs
(5) 3 programs

10. Are you aware that Pima Community College offers non-credit community service courses
145 tailored to your and your employees' needs?
86 % ☐ Yes 14 % ☐ No

If you want more information about community service courses check this circle. ○

11. Are you aware that the Pima Community College Institute offers specially tailored courses
143 within flexible time periods to meet training needs in managerial and technical areas?
70 % ☐ Yes 30 % ☐ No

If you want more information about Pima Community College Institute check this circle. ○ 26 %

12. Are you aware of the PCC Cooperative Education program which offers course credits for
141 work experience related to students' career goals?
70 % ☐ Yes 30 % ☐ No

If you want more information about PCC Cooperative Education check this circle. ○ 20 %

13. Do you know about the Pima Community College Skill Center?
140
66 % ☐ Yes 34 % ☐ No

If you want more information about PCC Skill Center check this circle. ○ 23 %

14. Are you satisfied with the quality of occupational programs offered by Pima Community
128 College?
47 % ☐ Very satisfied 13 % ☐ Somewhat satisfied 32 % ☐ Uncertain
8 % ☐ Need some improvement 0 ☐ Need major improvement

If you have any level of satisfaction other than "Very satisfied," please identify the specific program (or its former students or graduates) for which you have a concern.

Program	Comment
(4) 1 program	
(2) 2 programs	

COMMENTS (Use this space and the back for any comments you wish to make.)
18

17 % (3) Favorable comments
22 % (4) Neutral comments
61 % (11) Comments expressing concern

THANK YOU FOR HELPING US REVIEW OUR PROGRAMS WITH YOU!
PLEASE RETURN YOUR COMPLETED QUESTIONNAIRE BEFORE MONDAY, MARCH 28,
USING THE ENCLOSED POSTAGE-PAID ENVELOPE.

High Technology Firms of Pima and Santa Cruz Counties

Firm Names	Products	Number of Employees	Expected Hires This Year
IBM General Products Division I-10 & Rita Rd. Tucson, AZ 85744	Non-Impact System Printers Disk File Storage Control Units	5,700	600
Hughes Aircraft Nogales Hwy. Tucson, AZ 85706	Military Missile Systems	5,500	500
TEC, Inc. 2727 N. Fairview Ave. Tucson, Arizona 85706	Computer Terminals & Keys Boards Indicator Lights	1,411	50
Burr-Brown Research Corp. 6730 S. Tucson Blvd. Tucson, AZ 85706	Electronic Research	1,200	200
Gates Learjet Corp. 7777 S. Old Nogales Hwy. Tucson, AZ 85706	Corporation Jet aircraft	1,040	
Air-Research Co. Garrett Corp. N. Oracle Road Tucson, AZ		1,000+ (projected)	
National Semiconductor 5901 S. Calle Santa Cruz Tucson, AZ	Assemble Micro-Chips & Integrated circuits	450	100
Hamilton Test Systems 2301 N. Formes Blvd. Tucson, AZ 85745	Test Equipment Environmental Control Systems	412	
West-Cap Arizona 2201 E. Elvira Rd. Tucson, AZ 85706	Paper, film magnetics & capacitors for electronic industry	260	25
Unitronics, Inc. 1806 W. Grant Rd. Tucson, AZ	Computer printed circuit boards	240	Modest Expand
Lambda Electronics 1150 W. Drexel Rd. Tucson, AZ	Devices that control volume source of power for electronic industry.	200	Expand.

(Continued)

Firm Names	Products	Number of Employees	Expected Hires This Year
Thor Electronics of Arizona 3560 S. Broadbent Rd. Tucson, AZ	Electronic components for IBM	150	Expand.
Micro-Accurate Corp. 2425 E. Medina Rd. Tucson, AZ		135	Expand.
Jerrold Electronics Corp. 4640 S. Park Place Tucson, AZ 85714 (1,000 employed in Sonora, Mexico)	Electronic Equip used in Cable TV systems	100	Expand.
R.F. Systems General Instrument Division 4229 S. Fremont Tucson, AZ 85714 (plant in Nogales, Mexico)	Coaxial cable		
Apex Microtechnology Corp. 1130 E. Pennsylvania St. Tucson, AZ	Electronic Supplier to other firms	12	50
Memorex 4201 S. Santa Rita Tucson, AZ	Warehouse: Assemble Computer Cables, circuit boards and disk drives	100	Expand.
Brush Wellman 6100 S. Tucson Blvd Tucson, AZ	Ceramic products for electronic industry.	92	25
MEC International 3690 S. Park Ave. Tucson, AZ	Printed circuit boards and electro-mechanical assemblies	40	39
Midian Electronics 2302 E. 22nd St. Tucson, AZ	Subminiature encoders & decoders	20	Expand.
Ayer Engineering Co. 1250 W. Roger Rd. Tucson, AZ	Electroytic capacitors	35	Modest Expand.

(Continued)

Firm Names	Products	Number of Employees	Expected Hires This Year
International Microtronics Tucson Printed Circuits 4016 E. Tennessee St. Tucson, AZ	Digital instruments for robots	32 6	Expand.
Zirmex, Inc. 2045 N. Forbes Blvd. Tucson, AZ	Subcomponents for microelectronics	27	50
Optical Electronics, Inc. 3150 E. 46th St. Tucson, AZ	Amplifers, three dimensional displays and function modules	16	Expand.
Nortronics Co., Inc. Tucson Plant 7681 N. Business Park Dr. Tucson, AZ (Twin Plan in Nogales, Sonora, Mexico)	Recording heads for data processing	12	48
Tesso Electronics Systems Support Co. of Arizona, Inc. 1140 S. Sixth Ave. Tucson, AZ	Wire & cable harness assemblies & printed curcuit boards	12	Expand.
O'Hare Metal Prod. Div. 3220 E. Lincoln St. Tucson, AZ		11	10
Analog Precision, Inc. 1620 Park Ave. Tucson, AZ	Computer interfaces motor controllers (custom electronics for heavy industry)	9	Expand.
J.R. Conwell, Inc. 3801 N. Oracle Rd. Tucson, AZ	Robot Arms	5	Expand.
Digital Television Imagery 7835 N. Avenida de Carlotta Tucson, AZ	Vido Processors	4	Expand.
Beta TEK, Inc. 1664 E. 18th St. Tucson, AZ	Electronic equipment for self service gasoline stations	30	150

(Continued)

Firm Names	Products	Number of Employees	Expected Hires This Year
Tucsonix Peppertree Ranch Business Park Tucson, AZ (plant in Nogales Mexico employs 400 people)	Avionics & Other electronic instruments. Ceramic capacitors.	110	50
Thermal Engineering of Arizona, Inc. 4419 N. Highway Drive Tucson, AZ			
Tucson Electric Power Co. 220 W. Sixth St., Tucson, AZ		1,100	
Mountain Bell 100 E. Alameda Tucson, AZ		2,400	
Schmitt Energy Systems Corp. 1860 W. Grant Rd. Tucson, AZ			

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